Before the Federal Communications Commission Washington, D.C.

In the Matter of:)	
)	
Modernizing the E-Rate Program for)	WC Docket No. 13-184
Schools and Libraries)	
)	
)	

Comments of Funds For Learning, LLC on Making the Category Two Budget Approach Permanent and Other Modifications to the Category Two Budget Approach

Funds For Learning® (FFL) supports the Commission's proposed rule to make the Category Two (C2) Budget Approach permanent. As FFL developed the proposal on which it is based, we are naturally pleased with, and proud of, its well-documented success.¹

In addition to these comments, FFL has submitted separately a custom dataset of C2 funding request information – *E-Rate Category Two Budget Utilization FY 2015 to FY 2019* – to help the Commission make the important decisions it needs to make in this proceeding².

Overview

1. <u>System-Wide C2 Budgets are an Absolute Necessity.</u> We, along with 93% of applicants who responded to an FFL survey,³ also support the Commission's proposal to move from a per-school or per-library budget to a per-district or per-system budget for C2 services. This is exactly what FFL urged the Commission to do back in 2013. Because the per-site approach is inefficient and counter-productive to the E-rate program's goals and objectives, we were surprised by the Commission's decision to adopt it in the first place.

¹ FFL's proposal was broader than what the FCC ultimately decided to adopt. Under it, applicants would have been able to allocate their annual E-rate budget among eligible services in any category and, as the FCC is proposing now, among the eligible buildings in their school district and library systems. *See* FFL Comments submitted to the FCC on September 16, 2013. https://ecfsapi.fcc.gov/file/7520944155.pdf

² See E-Rate Category Two Budget Utilization FY 2015 to FY 2019. https://ecfsapi.fcc.gov/file/108162826412441/C2%20NPRM%20Data%20Report%20-%20Funds%20For%20Learning.pdf

³ See 2019 E-rate Trends Report, FFL ex Parte Submission, WC Docket No. 13-184, August 1, 2019. https://ecfsapi.fcc.gov/file/108010655418094/FY2019TrendsReport-ExParte2019-07-30.pdf (p. 23)

The Commission suggests that a change to system-wide budgets could have a profound effect on the E-rate application process, making it considerably simpler for applicants to apply for, and for USAC to review, applications for C2 services. We agree. Based on our experience helping large applicants to complete many hundreds of lines of shared-budget information on their Form 471 applications and communicating daily with E-rate applicants and USAC reviewers to address per-site, budget-related issues for applicants of all sizes, we are certain that this change will benefit the program in all of the positive ways that the NPRM suggests it will and more.

- 2. C2 Budget Multipliers Should be Increased. On the other hand, we disagree with the Commission's decision not to propose an increase to the C2 multipliers for school and library budgets on the grounds that applicants have not been maxing out the budgets they already have. The data on which the Commission based this decision is misleading. Our analysis shows that, to meet the actual current demand for E-rate funding, at a minimum, the school multiplier should be increased to \$256 per student, the rural library multiplier to \$2.99 per sq. ft., and the urban library multiplier to \$5.97 per square foot.
- 3. C2 Budget Floors Should be Increased. One of the questions the Commission asks is whether minimum budget floors should be increased. They should be. Nationwide, the average C2 budget is \$75,166, nearly eight times greater than the budget floor now in place. Note, too, that between FY 2015 and FY 2019, 47.7% of sites subject to the budget floor did not touch their C2 budgets. Compare that with the average percentage of zero budget utilization for sites with a budget above the floor amount during the same time period, which was 12.7%. To remedy this glaring inequity, we believe that budget floors should be increased to \$30,000.
- 4. C2 Eligible Services Should be Expanded. The Commission also asks whether there are any additional services that should be made eligible for C2 funding. Yes, there are. In terms of achieving all the E-rate program's goals and objectives, it makes perfectly good sense to give applicants the flexibility to spend their C2 budgets on whatever network infrastructure they believe is most important for them to spend it on, including I.T. security and network monitoring. We cannot think of any good reason why the Commission would not want to do this. That only 33% of schools and 6% of libraries maxed out their budgets in the past five years proves that applicants can be trusted to purchase only those goods and services which they need and can afford.

For a comprehensive review of Category 2 budget request data, see our separate filing E-Rate Category Two Budget

⁵ To illustrate this and other important data, we have provided tables and charts in the next section of our comments.

Utilization FY 2015 to FY 2019.

⁴ NPRM at para. 14.

THE C 2 BUDGET APPROACH SHOULD BE MADE PERMANENT

Origin of the "Budget Approach." In 2013, there was much concern about whether any but the most economically disadvantaged applicants would ever receive funding for network infrastructure. Or worse, would the exploding demand for Priority One broadband funding wind up consuming every single dollar of E-rate funding, leaving nothing left in the bank for Priority Two Internal Connections?

To head off the looming crisis, FFL developed a comprehensive proposal, which it officially made public on March 19, 2013.⁶ On that day, representatives of FFL and the Miami-Dade School District met with Commissioner Rosenworcel to explain that the E-rate program's "all-you-can-eat" approach to funding was unsustainable and that the Commission needed to put E-rate applicants on a budget -- stat. A fair and equitable "budget" solution, we assured her, would accomplish all the following:

- Enable the Commission to distribute a finite amount of highly valuable E-rate funds more equitably;
- Ensure that every school and library has the opportunity to receive a meaningful amount of funding annually;
- Restore to schools and libraries the ability to decide for themselves how best to
 distribute funding among the schools and libraries in their respective systems and on
 what categories of service to spend that money on;
- Force applicants to drive harder bargains with their service providers and to think much more carefully about how to allocate and spend both their Priority One and Two dollars;
- Enable USAC to review and process applications much more quickly, which would lead, in turn, to timely funding decisions and thus much higher E-rate utilization rates; and
- Encourage applicants to develop realistic, multi-year project plans, since the annual
 amount of funding that they could receive, IF they needed it all, would be predictable.
 There would be no penalty for going "under budget" and indeed the Commission might
 even want to consider rewarding applicants who did so by permitting them to roll over
 all or a part of their unused annual budgets.

After listening to a much-spirited debate among E-rate stakeholders about whether and how to implement E-rate budgets, the Commission decided that the program did need "budgets" to thrive and possibly even to survive. But whereas we had proposed a multicategory, system-wide approach to budgeting, the Commission decided to take a narrower path instead, establishing budgets for C2 network infrastructure services only and a budget for every

⁶ Notice of Ex Parte meeting with Commissioner Rosenworcel and associated slide presentation. See https://ecfsapi.fcc.gov/file/7022134822.pdf and https://ecfsapi.fcc.gov/file/7022134822.pdf and https://ecfsapi.fcc.gov/file/7022134821.pdf, respectively.

individual school and library building, rather than one budget each for every school and library system.

What a Permanent Budget Approach Should Look Like Going Forward. Because the C2 budget approach has been such a well-documented success, ⁷ it should be made permanent. What's more, by changing from per-site to per-system budgets, as FFL proposed initially and the FCC is proposing now, we guarantee that the entire budgeting process will be permanently improved.

1. <u>SYSTEM-WIDE C2 BUDGETS ARE AN ABSOLUTE NECESSITY</u>

One of the cornerstones of our 2013 proposal was giving applicants the freedom to allocate their annual E-rate budgets among the eligible buildings in their school districts and library systems. Being able to use their budgets in this fashion was going to make it possible for applicants to get "the most bang for their E-rate bucks" and to use their local funds much more effectively. Plus, it was going to have the added benefit of making applying for C2 discounts so much easier.

Instead of giving applicants one budget to cover all their eligible sites, however, the Commission decided to give applicants as many budgets as they had eligible sites. This proved to be a mistake, as the large amount of underused and unused budgets and the nightmare of a USAC budget-related review process amply illustrates. Obviously, the Commission realizes now that this was a mistake, and we thank the Commission for initiating this proceeding to correct it.

The per-site budget approach to C2 funding does not work for several obvious and some not so obvious reasons. A system-wide approach will fix this. Below are specific examples related to (1) variable cost factors, (2) inaccessible funds, (3) inaccurate and incomplete data, (4) burdensome and inaccurate reporting, and (5) counterproductive rules and administration.

Variable Cost Factors

The cost of purchasing and installing C2 infrastructure at school and library buildings varies widely because of the age and type of the building's construction, the building's size, the building's location, the grade levels using the building, the technology-readiness of the educational programs in the building, the age, type, and amount of the building's existing network infrastructure, local building codes and permitting processes, local labor and material

⁷ See NPRM at para. 5 ("... the category two budget approach has provided schools and libraries with more certain and equitable funding for internal connections..." and para. 6 (... the category two budget approach has generally resulted in a more equitable distribution of funding that better approximates the makeup of E-Rate applicants ... Category two support has been disbursed in all fifty states and five territories and to applicants at all discount levels.")

costs, hours available for installation, and so on. Because of this, applicants wind up with money they do not need in some of their building's budgets and not enough money in others.

A system-wide approach to C2 budgets eliminates this problem by giving to each school and library system the discretion to allocate its C2 E-rate budget as it sees fit among its facilities, thus permitting it to address, each year, what it determines to be its local networking needs. Allowing applicants to allocate dollars according to their specific needs will reduce the digital inequity that can exist between sites, particularly between older and newer buildings.

Inaccessible Funds

Budgets are inaccessible and cannot adequately be utilized whenever an applicant (1) does not need the money left in a building's budget (even though the applicant may need it for C2 infrastructure elsewhere in its system) or (2) the budget floor, or the remaining budget amount, is not enough to justify the administrative burden and delays associated with the application process for that particular building. The latter problem is magnified by the requirement that applicants artificially reduce their C2-related expenditures to an amount below a site's budget amount. A remaining budget balance cannot simply be applied *towards* a purchase. This means that only items that cost less than the budget amount can be purchased. Consequently, school and library systems wind up with buildings with budget balances that they cannot tap into to help pay for C2 infrastructure at other buildings.

The ability to allocate money from one C2 budget to all the buildings in a school or library system eliminates this problem. And, even if applicants are not allowed to report project costs in excess of their single, system-wide budget amounts, which we hope will not be the case, at least the impact of this practice will be much less severe.

Inaccurate and Incomplete Data

The current system provides the Commission with inaccurate and incomplete C2 data. Applicants are required to submit costs at or below their budget amount when they apply for discounts. This reduces the accuracy of data on the cost of C2 products and services. This is why USAC's system has no information in it about how much money in excess of their respective building budgets applicants are actually intending to spend, and do wind up spending, on C2 products and services. Thus, the Commission's data on the demand for and cost of C2 products and services is incomplete. A corollary problem with this approach to per-site budget administration is that it oftentimes forces applicants to state on their applications that services cost less than they actually do, in effect forcing them to lie.

System-wide C2 budgets will enable the FCC to collect much more accurate data. And,
 if the Commission instructs USAC to accept applications for more than the pre-discount

system-wide budget amount, but to fund only up to the budget amount, this will no longer be an issue.

Burdensome and Inaccurate Reporting

Having to use per-site budgets to complete E-rate applications is an unnecessarily burdensome task, as no doubt other commenters will attest. The complexity involved in applying for discounts on shared C2 infrastructure is even worse, as the per-site budget approach requires applicants to allocate a portion of the total cost to each building on the network and to deduct that amount from each building's budget. Not only is this time-consuming for applicants and USAC, it reduces the value of the information collected. It is far better for applicants to report the actual cost and location of equipment rather than divvying up the expense and falsely spreading it around between their buildings.

System-wide C2 budgets, combined with the ability to deploy equipment to all facilities, including non-instructional facilities, will solve this problem, as the data will be accurate and only have to be entered once. In addition, all the back-end administrative processes will be immeasurably simplified, as there will only be one budget amount for each applicant and USAC to keep track of.

Counterproductive Rules and Administration (Part I)

The per-site budget approach, the restrictive administration of product substitution rules, and the program's 3-year prohibition against equipment transfers combine to cost applicants a tremendous amount of C2 funding for no good reason. Here is an example: the pre-discount price of routers and WAPs on a school district's Form 471 exceeds the C2 budget for that school; consequently, USAC asks the applicant what it wants to remove from its request so as not to exceed the school's budget; the school district decides to strike a router; a year later, at the time of installation, it turns out that the school district made a mistake – it needed that router, but not as many WAPs; USAC rejects the school district's request to substitute the extra WAPs for a router, because, it says, the product substitution rules prohibit it; so the school district asks if it can use the WAP funding to buy WAPs for another school in the district that needs them; USAC says "no" because the program's transfer rules prohibit it.

System-wide C2 budgets will solve most of this problem because, rather than having to apply several months, a year, or even years in advance in some circumstances for the exact quantity of products and services that it will need for each building, the applicant will be able to apply for discounts on C2 projects throughout its system without having to worry about the consequences of busting the budgets of the individual buildings in its C2 infrastructure plans. Moreover, when the time for installation arrives, the applicant will be free to install its E-rate supported C2 infrastructure at any eligible site

in its system where it decides that infrastructure is needed the most.⁸ However, unless the Commission relaxes the product substitution rules substantially, they will continue to be a substantial, counterproductive impediment to the effective use of C2 budgets -- even under a system-wide approach.

Counterproductive Rules and Administration (Part II)

Administration of the C2 Per-Site Budget Rules Wiped Out a Whopping 29% of C2

Projects in 2018. Nearly a third of FY2018 C2 applications were denied because applicants did not reduce the scope of their C2 projects to meet the per-site budget. Imagine having a \$10 gift card to spend at Starbucks. You place your order and the total comes to \$15.25. Does the barista instruct you to reduce the size of one or more of your coffees and/or to remove the muffins from your order? Of course not. You hand over your gift card, plus the extra \$5.25 needed to cover the additional cost over the amount remaining on your gift card.

But the current C2 budget system is not administered that way. Instead of making E-rate applicants pay the difference on their order, they are required to reduce it. Items are eliminated, and quantities are changed to meet the budget cap at each site. Alone, this would be bad enough, but this is not the worst of it. If an applicant does not understand the requirement to change its order, or if it disagrees with USAC's calculation of a budget amount, the project is denied funding altogether. If the quantities, items, or unit costs are not reduced below the cap, the project stops. Unfortunately, this is not some rare occurrence. On the contrary, these C2 budget cap denials are the most prominent reason that applicants are denied funding for C2 projects⁹.

Portion of FY2018 Category Two Denials by Reason



⁸ The NPRM at paragraph 18 asks whether the equipment transfer rules within a district Commission should be eased if it moves to district-wide budgets, and shares several good reasons for doing so. We fully support this rule change.

⁹ See https://www.fundsforlearning.com/blog/2018/10/budget-regs-stop-29pct-of-c2-projects

One would expect to see denials for violations of competitive bidding or contract award violations, but for budget caps to even be a reason for denial, let alone the top reason, is deeply disturbing. If the Commission instructs USAC to accept applications for more than the prediscount, system-wide budget amount, but to fund only up to the budget amount, USAC will no longer be able to deny C2 funding for this reason.

2. BUDGET MULTIPLIERS SHOULD BE INCREASED

Analysis of prior funding year data indicate that budget multipliers should, at a minimum, be:

Per student	\$256
Per square foot (rural library)	\$2.99
Per square foot (urban library)	\$5.97

The Commission proposes that the existing multipliers for the C2 budget approach be maintained, because the Wireline Competition Bureau (WCB) reported that the C2 budget approach "appears to be sufficient for most schools and libraries." We disagree.

The reason WCB concluded as it did was because "approximately half of schools and most libraries [used] less than half of their allocated five-year budget and a supermajority of schools and libraries ... used less than 90% of their budgets." That so many applicants did not max out their budgets is not an indicator that the current multipliers are sufficient, but rather, that different sites have different needs. As previously discussed, there are variable cost factors that can increase or decrease the expense associated with a C2 project. The fact that most sites did not need to be capped misses the point that a significant number of sites were underserved by the existing cap and would have benefited from additional support had the Commission allowed it.

New analysis of C2 budget utilization from FY2015 to FY2019 and the results of a recent FFL survey of E-rate applicants yield important new insights – namely, the current budget multipliers are too low. Therefore, adjustments ought to be made to them.

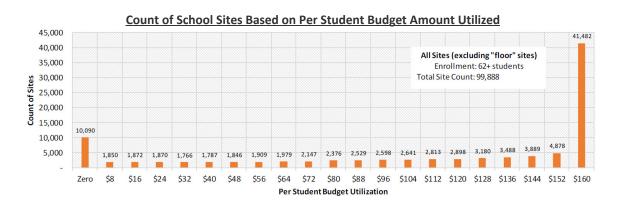
C2 Data Supports Increasing the Per-Student Multiplier to \$256

The figure below shows the count of school sites based on the per student amount of budget utilized over the past five years¹¹. Of the 99,888 sites that were not subject to the budget floor, 49,639 sites, or 50%, used \$136 or less per student. The other 50% used more than

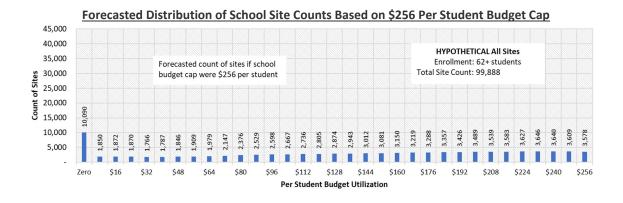
¹⁰ NPRM at para. 10.

¹¹ See E-Rate Category Two Budget Utilization FY 2015 to FY 2019, p. 14-17.

\$136 per student. The spike in the number of sites using \$160 per student corresponds to the budget capping of C2 expenditures at this level. It is not as if \$160 is the magical number at which demand stops. It just happens to be the number at which the FCC said support would stop -- and that applicants would have to report demand at or below.



Looking at the graph above, it is easy to imagine that if the budget cap were higher, then there would be 3,000 or 4,000 school sites at the \$160 per student level instead of 41,482. Indeed, we would also expect to see 3,000 or 4,000 at the \$164 per student level, \$168 per student level, and so on. The following chart illustrates what this might look like.



It is our hypothesis that the real count of school sites – the count that would be based on actual "per student" spending (and not the artificially capped data that we have) – would look much more like the second, hypothetical chart, than the first chart. It is this type of thought process and mathematical inquiry that has yielded the \$256 per student budget multiplier for school sites.

C2 Data Supports Increasing the Per Ft² Multipliers to \$2.99 and \$5.97

Library budget utilization data from 2015 to 2019 yields similar, yet less pronounced results. Although most libraries did not fully utilize their C2 budgets, the demand curve suggests that a small percentage of libraries would have benefited from a slightly higher per square foot budget cap.

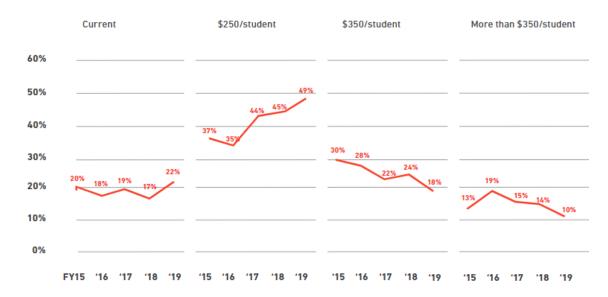
Having completed the same type of trend analysis for library sites as was completed for school sites¹², we present the following:

- For rural libraries, the data suggests the cap be set at \$2.99 per square foot.
- For urban libraries, the data suggest the cap should be set at \$5.97 per square foot.

Results of Survey Indicate that the Current School Multiplier Is Insufficient.

In a recent survey that FFL conducted among E-rate applicants¹³, we received 1,763 responses. For 22% of those applicants, the current budget level was adequate, for 49% of them, \$250.00 per student would be adequate, for 18% of them, \$350.00 per student would be adequate, and for 10% of them, more than \$350 per student would be necessary. The following chart, taken directly from the report, illustrates the dollar amount per student that schools indicate is necessary. The survey data extends back to 2015 – and every year the highest percentage of applicants have indicated that \$250 per student is the necessary amount.

How much would you need to fully fund your Category 2 needs? (School)



¹² See E-Rate Category Two Budget Utilization FY 2015 to FY 2019, p. 23.

¹³ 2019 E-rate Trends Report, Funds for Learning ex Parte Submission, WC Docket No. 13-184, August 1, 2019.

3. BUDGET FLOORS SHOULD BE INCREASED

Analysis of prior funding year data shows that the budget floor should be \$30,000.

In the NPRM, the Commission asks, "Would raising the budget floor to correspond with schools that participate at a higher rate be an appropriate budget floor level?" We think it would be. New analysis of C2 budget utilization from FY2015 to FY2019 shows that the current budget floor is much too low. Nationwide, the average C2 budget is \$75,857, nearly eight times greater than the budget floor is now. Therefore, we agree with the Commission's suggestion that it ought to be adjusted upward.

C2 Data Supports Increasing the Budget Floor to \$30,000

Nationwide, the average budget utilization from 2015 to 2019 was 60.3%; however, for small sites – those that only qualify for the budget floor of \$9,793 – the average utilization rate was 33.4%, nearly half the normal utilization rate.

The chart below shows the average utilization rate for each of the various site budget levels, starting at the budget floor and continuing up to \$150,000. The utilization of site budget drops significantly for sites with budget amounts set below \$30,000. Reviewing the data, it appears that the "normal" C2 budget utilization level begins around this \$30,000 level.

Average Utilization Based on Site Budget Amount (FY2015-FY2019)

Below average budget utilization at sites with budget cap less than \$30,000



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Source: E-rate Manager® (August 7, 2019)

The lower utilization rate at sites qualifying for the budget floor is not limited to small, single site applicants. As illustrated in the following table, even large school districts and library systems have lower average utilization rates at their "floor" budget sites. For example, for applicants that consist of 10 to 24 sites, the average budget utilization rate for sites with budgets greater than the floor is 66.2%. For sites with a budget set at the floor, the average budget utilization rate drops to 35.6%.

Average Site Budget Utilization

By Parent Entity Site Count and Floor

Parent Site count	Above Floor	At Floor
Single	51.4%	27.7%
2 - 4	66.5%	39.0%
5 - 9	65.7%	36.9%
10 - 24	66.2%	35.6%
25 - 49	64.3%	33.3%
50+	65.7%	24.3%
Overall	64.6%	33.4%

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Source: E-rate Manager® (Aug 7, 2019)

Sites with a floor-based budget have a lower utilization rate, regardless of the applicant's size. This is further indication that the budget floor amount is too low; and, given the utilization data, it suggests that the budget floor should be set at \$30,000.

4. C2 ELIGIBLE SERVICES SHOULD BE EXPANDED

The Commission states that it "made managed internal broadband services, caching, and basic maintenance of internal connections eligible for category two support under the category two budget approach" because it found that "budgets allayed concerns about wasteful spending and provided applicants with greater flexibility to determine their own needs." The Commission goes on to ask "whether are there additional services that we should make eligible for category two funding or any other issues regarding category two eligible services we should consider?"

Yes, there most certainly are additional services that the Commission should make eligible for C2 funding -- first and foremost, I.T. Security hardware and software, and a very close second, Network Monitoring hardware, software, and services. Indeed, in this new, funding-

¹⁴ NPRM at para. 9.

delimited world of C2 budgets, no network infrastructure should be ineligible.

The C2 budget approach has made reckless spending a thing of the past. Today, applicants have no choice but to do their best to procure and, thereafter to apply for discounts on, only what they are reasonably likely to need to build, operate, and maintain their broadband networks in accordance with their respective local goals and objectives. It is important to note too that working within a budget also gives applicants a very strong incentive to bargain with vendors as hard as they possibly can to get the best prices they possibly can on anything they want to buy that is C2 eligible. Therefore, there is no reason, and indeed it makes no sense, not to permit applicants to use their C2 budgets to purchase whatever network infrastructure they decide they need.

Broadband Networks Cannot Function Without Security and Monitoring.

In today's electronic world, locking down a network is as important as locking all of the doors to your house. But rather than encouraging applicants to keep their networks as secure as possible, the current eligibility rules do just the opposite. This is foolish and counterproductive. I.T. security hardware and software protect against internal and external network attacks, keep all communications private, control access to information on the network, and, by giving users confidence in the security of the network, encourages them to use it.

Network monitoring hardware, software, and services keep the network "healthy" by constantly reviewing and analyzing all of the traffic running on it for anything out of the ordinary that might affect either its performance or availability. Together, network security and monitoring give networks the protection they need to function optimally and, at times, even at all. In effect, Network Security operates as the network's police force and Network monitoring as its medical staff. The safety and health of the network depends on both. Why would the Commission not want applicants to keep their E-rate-supported broadband networks secure and healthy?

Cost Allocation Is Unnecessary Under the Budget System

A decision not to broaden C2 eligible services would also be a mistake because it would mean the indefinite continuation of a bureaucratic albatross that increases complexity and reduces value for all parties: the cost allocation rules for ineligible functions in an otherwise eligible device. Cost allocation is a confusing, difficult, arbitrary, discriminatory, incredibly time-consuming, and oftentimes contentious process that is ineffective as a compliance tool, typically costs applicants badly needed funding for no good reason, and is squarely at odds with the E-rate Modernization Order's goal of eliminating unnecessary complexity in the program.

Cost allocation is a well-intentioned administrative policy created a long ago at a time when the Commission found itself shielding the E-rate program from a string of powerful attacks. The policy is based on a strict, literal reading of the rules that focuses laser-like on not funding anything even remotely or arguably ineligible, theoretically or otherwise. Presumably, it was designed to keep the critics of that era at bay.

Cost allocation may sound good in theory, but when applied in the real, complex world of procurement and commercial transactions, it is anything but that. Time after time, in our experience, the results of cost allocation ignore reality and defy common sense. It is an anachronism, a policy remnant from an earlier E-rate time.

Modifying the E-rate program's DNA has been the goal of the modernization process since the beginning. For the Commission to transform the Schools and Libraries program into a program that is compatible with 21st century broadband technology, and much more user-friendly -- now is the time, finally, to toss the cost allocation rules out the door.

Respectfully submitted,

/s/John D. Harrington

John D. Harrington Chief Executive Officer Funds For Learning, LLC

jharrington@fundsforlearning.com 405-341-4140

2575 Kelley Pointe Parkway, STE 200 Edmond, OK 7313